BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads and Drains at Niranthara Layout in Ward No 05 Byatarayanapura Sub division

Est Cost: =40.0Lakh

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
1	KSRRB 200-8. Clearing and grubbing road land including uprooting rank vegetation, grass, brush, shrubs, saplings and trees of girth upto 300mm, by manual means, in area of light jungle, removal of stumps, disposal of unserviceable materials, stacking of serviceable materials labour charges complete as per specifications. MORTH / Chapter 2 (P.No.136, I.No.18.11 of PW, P&IWTD SR 2016-17)								
	Vegetation Clearance	Cum							
	Niranthara Layout								
	Main Road 1		2	280.00	0.60		336.00		
	Cross Road 1		2	20.00	0.60		24.00		
	Cross Road 2		2	20.00	0.60		24.00		
	Cross Road 3		2	116.00	0.60		139.20		
	Cross Road 5		2	125.00	0.60		150.00		
	Cross Road 6		2	55.00	0.60		66.00		
	Cross Road 7		2	86.00	0.60		103.20		
	Cross Road 9		2	84.00	0.60		100.80		
	Main Road 2		2	65.00	0.60		78.00		
	Cross Road 10		2	104.00	0.60		124.80		
	Cross Road 11		2	156.00	0.60		187.20		
	Cross Road 12		2	196.00	0.60		235.20		
							1568.40	6.36	**9975.02**
	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)							-	
	Desilt	Cum							
	Niranthara Layout								
	Main Road 1		2	280.00	0.50	0.45	126.00		
	Cross Road 1		2	20.00	0.50	0.45	9.00		
	Cross Road 2		2	20.00	0.50	0.45	9.00		
	Cross Road 3		2	116.00	0.50	0.45	52.20		
	Cross Road 5		2	125.00	0.50	0.45	56.25		
	Cross Road 6		2	55.00	0.50	0.45	24.75		
	Cross Road 7		2	86.00	0.50	0.45	38.70		
	Cross Road 9		2	84.00	0.50	0.45	37.80		
	Main Road 2		2	65.00	0.50	0.45	29.25		
	Cross Road 10		2	104.00	0.50	0.45	46.80		
	Cross Road 11		2	156.00	0.50	0.45	70.20		
	Cross Road 12		2	196.00	0.50	0.45	88.20		
							588.15	186.92	**109937.00**

3	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	Bad Reaches								
			10	2.00	2.50	0.23	11.50		
			15	1.80	1.50	0.23	9.32		
			7	0.50	6.50	0.23	5.23		
			20	1.00	1.20	0.23	5.52		
							31.57	155.16	**4898.01**
4	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub-base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Bad Reaches	Cum							
			10	2.00	2.50	0.23	11.50		
			15	1.80	1.50	0.23	9.32		
			7	0.50	6.50	0.23	5.23		
			20	1.00	1.20	0.23	5.52		
							31.57	1768.08	**55813.87**
	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Bad Reaches	Cum							
			10	2.00	2.50	--	50.00		
			15	1.80	1.50	--	40.50		
			7	0.50	6.50	--	22.75		
			20	1.00	1.20	--	24.00		
							137.25	27.56	**3782.61**
6	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17)								
	Niranthara Layout	Sqm							
	Main Road 1		1	280.00	5.00	--	1400.00		
	Cross Road 1		1	20.00	4.50	--	90.00		
	Cross Road 2		1	20.00	4.50	--	90.00		
	Cross Road 3		1	116.00	4.80	--	556.80		
	Cross Road 5		1	125.00	5.00	--	625.00		
	Cross Road 6		1	55.00	4.80	--	264.00		
	Cross Road 7		1	86.00	4.90	--	421.40		
	Cross Road 9		1	84.00	4.80	--	403.20		
	Main Road 2		1	65.00	5.50	--	357.50		
	Cross Road 10		1	104.00	4.40	--	457.60		
	Cross Road 11		1	156.00	4.50	--	702.00		
	Cross Road 12		1	196.00	4.80	--	940.80		
	Cross Roads near by area		3	220.00	5.30	--	3498.00		
			1	135.00	5.50	--	742.50		
							10548.80		
	Deduct prime coat						-137.25		
							10411.55	3.18	**33108.73**

KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
Niranthara Layout	Sqm							
For Laying BC								
Main Road 1		1	280.00	5.00	--	1400.00		
Cross Road 1		1	20.00	4.50	--	90.00		
Cross Road 2		1	20.00	4.50	--	90.00		
Cross Road 3		1	116.00	4.80	--	556.80		
Cross Road 5		1	125.00	5.00	--	625.00		
Cross Road 6		1	55.00	4.80	--	264.00		
Cross Road 7		1	86.00	4.90	--	421.40		
Cross Road 9		1	84.00	4.80	--	403.20		
Main Road 2		1	65.00	5.50	--	357.50		
Cross Road 10		1	104.00	4.40	--	457.60		
Cross Road 11		1	156.00	4.50	--	702.00		
Cross Road 12		1	196.00	4.80	--	940.80		
Cross Roads near by area		3	220.00	5.30	--	3498.00		
		1	135.00	5.50	--	742.50		
						10548.80	11.66	**122999.01**
KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
Niranthara Layout	Cum							
Main Road 1		1	280.00	5.00	0.04	56.00		
Cross Road 1		1	20.00	4.50	0.04	3.60		
Cross Road 2		1	20.00	4.50	0.04	3.60		
Cross Road 3		1	116.00	4.80	0.04	22.27		
Cross Road 5		1	125.00	5.00	0.04	25.00		
Cross Road 6		1	55.00	4.80	0.04	10.56		
Cross Road 7		1	86.00	4.90	0.04	16.86		
Cross Road 9		1	84.00	4.80	0.04	16.13		
Main Road 2		1	65.00	5.50	0.04	14.30		
Cross Road 10		1	104.00	4.40	0.04	18.30		
Cross Road 11		1	156.00	4.50	0.04	28.08		
Cross Road 12		1	196.00	4.80	0.04	37.63		
Cross Roads near by area		3	220.00	5.30	0.04	139.92		
		1	135.00	5.50	0.04	29.70		
						421.95	7083.98	**2989099.53**

9	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Edge line	Sqm	2	1662.00	0.10	--	332.40		
							332.40	542.72	**180400.13**
							Total Construction Cost		**3510013.910**
							Cost towards Preparation of DPR LS		**35101.00**
11							**Cost towards PMC / Third Party inspection LS**		**35101.00**
								Sub Total	**3580215.91**
12							**Miscellaneous and rounding off**		**419784.09**
								Total	**4000000.00**

Certificate.

1. The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2. The provisions made in the estimate are necessary and essential.
3. The workspot was inspected and work is found to be necessary.
4. The area comes within the Bruhat Bangalore Mahanagara Palike limits.

Assistant Executive Engineer

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Executive Engineer

20/1/17

Executive Engineer
Project Division
Yelahanka Zone
Bangalore

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Drains and Asphalting to Roads at Agrahara Layout Harihara Temple Surrounding Area in Ward No 05 Byatarayanapura Sub division

Est Cost: =50.0Lakh

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Desilt	Cum							
	Agrahara Layout								
	LHS								
	8th Cross		2	230.00	0.50	0.45	103.50		
	9th Cross		2	120.00	0.50	0.45	54.00		
	10th Cross		2	90.00	0.50	0.45	40.50		
	11th Cross		2	62.00	0.50	0.45	27.90		
	12th Cross		2	30.00	0.50	0.45	13.50		
	cross Road 1(8th - 9th)		2	26.00	0.50	0.45	11.70		
	cross Road 2(9th - 10th)		2	25.00	0.50	0.45	11.25		
	RHS								
	9th Cross		2	58.00	0.50	0.45	26.10		
	10th Cross		2	56.00	0.50	0.45	25.20		
	11th Cross		2	56.00	0.50	0.45	25.20		
	12th Cross		2	56.00	0.50	0.45	25.20		
	13th Cross		2	58.00	0.50	0.45	26.10		
	8th Main		2	156.00	0.50	0.45	70.20		
							460.35	186.92	**86048.62**
2	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	LHS								
	9th Cross		1	120.00	4.80	0.23	132.48		
	RHS								
	9th Cross		1	58.00	4.90	0.23	65.37		
	8th Main		1	156.00	5.00	0.23	179.40		
	Cross roads near by area								
	Cross road 1		1	190.00	5.50	0.23	240.35		
	Cross Road 2		1	180.00	5.90	0.23	244.26		
	Bad Reaches								
			10	2.00	2.50	0.23	11.50		
			12	1.80	1.50	0.23	7.45		
			7	0.50	6.50	0.23	5.23		
			15	1.00	1.20	0.23	4.14		
							890.18	155.16	**138120.41**
3	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								

	LHS	Cum							
	9th Cross		1	120.00	4.80	0.23	132.48		
	RHS								
	9th Cross		1	58.00	4.90	0.23	65.37		
	8th Main		1	156.00	5.00	0.23	179.40		
	Cross roads near by area								
	Cross road 1		1	190.00	5.50	0.23	240.35		
	Cross Road 2		1	180.00	5.90	0.23	244.26		
	Bad Reaches								
			10	2.00	2.50	0.23	11.50		
			12	1.80	1.50	0.23	7.45		
			7	0.50	6.50	0.23	5.23		
			15	1.00	1.20	0.23	4.14		
							890.18	1768.08	**1573910.34**
4	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kg\sqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	LHS	Sqm							
	9th Cross		1	120.00	4.80	--	576.00		
	RHS								
	9th Cross		1	58.00	4.90	--	284.20		
	8th Main		1	156.00	5.40	--	842.40		
	Cross roads near by area								
	Cross road 1		1	190.00	5.50	--	1045.00		
	Cross Road 2		1	180.00	5.90	--	1062.00		
	Bad Reaches								
			10	2.00	2.50	--	50.00		
			12	1.80	1.50	--	32.40		
			7	0.50	6.50	--	22.75		
			15	1.00	1.20	--	18.00		
							3932.75	27.56	**108386.59**
5	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17)								
	Agrahara Layout	Sqm							
	LHS								
	8th Cross		1	230.00	4.80	--	1104.00		
	9th Cross		1	120.00	4.80	--	576.00		
	10th Cross		1	90.00	4.80	--	432.00		
	11th Cross		1	62.00	4.70	--	291.40		
	12th Cross		1	30.00	4.60	--	138.00		
	cross Road 1(8th - 9th)		1	26.00	4.90	--	127.40		
	cross Road 2(9th - 10th)		1	25.00	4.50	--	112.50		
	RHS								
	9th Cross		1	58.00	4.50	--	261.00		
	10th Cross		1	56.00	4.60	--	257.60		
	11th Cross		1	56.00	4.80	--	268.80		
	12th Cross		1	56.00	4.30	--	240.80		
	13th Cross		1	58.00	4.50	--	261.00		
	cross roads -3		1	175.00	5.60	--	980.00		
	Cross road -4		1	70.00	5.30	--	371.00		
							5421.50		
	Deduct prime coat						-137.25		
							5284.25	3.18	**16803.92**

6	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)									
	Agrahara Layout	Sqm								
	For Laying BC									
	LHS									
	8th Cross		1	230.00	4.80	--	1104.00			
	9th Cross		1	120.00	4.80	--	576.00			
	10th Cross		1	90.00	4.80	--	432.00			
	11th Cross		1	62.00	4.70	--	291.40			
	12th Cross		1	30.00	4.60	--	138.00			
	cross Road 1(8th - 9th)		1	26.00	4.90	--	127.40			
	cross Road 2(9th - 10th)		1	25.00	4.50	--	112.50			
	RHS									
	9th Cross		1	58.00	4.50	--	261.00			
	10th Cross		1	56.00	4.60	--	257.60			
	11th Cross		1	56.00	4.80	--	268.80			
	12th Cross		1	56.00	4.30	--	240.80			
	13th Cross		1	58.00	4.50	--	261.00			
	8th Main		1	156.00	5.40	--	842.40			
	Cross roads near by area									
	Cross road 1		1	190.00	5.50	--	1045.00			
	Cross Road 2		1	180.00	5.90	--	1062.00			
	cross roads -3		1	175.00	5.60	--	980.00			
	Cross road -4		1	70.00	5.30	--	371.00			
							8370.90	11.66	**97604.69**	
7	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)									
	Agrahara Layout	Cum								
	LHS									
	8th Cross		1	230.00	4.80	0.04	44.16			
	9th Cross		1	120.00	4.80	0.04	23.04			
	10th Cross		1	90.00	4.80	0.04	17.28			
	11th Cross		1	62.00	4.70	0.04	11.66			
	12th Cross		1	30.00	4.60	0.04	5.52			
	cross Road 1(8th - 9th)		1	26.00	4.90	0.04	5.10			
	cross Road 2(9th - 10th)		1	25.00	4.50	0.04	4.50			
	RHS									
	9th Cross		1	58.00	4.50	0.04	10.44			
	10th Cross		1	56.00	4.60	0.04	10.30			
	11th Cross		1	56.00	4.80	0.04	10.75			
	12th Cross		1	56.00	4.30	0.04	9.63			
	13th Cross		1	58.00	4.50	0.04	10.44			
	8th Main		1	156.00	5.40	0.04	33.70			
	Cross roads near by area									
	Cross road 1		1	190.00	5.50	0.04	41.80			
	Cross Road 2		1	180.00	5.90	0.04	42.48			
	cross roads -3		1	175.00	5.60	0.04	39.20			
	Cross road -4		1	70.00	5.30	0.04	14.84			
							334.84	7083.98	**2371971.53**	

8	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Edge line	Sqm	2	1638.00	0.10	--	327.60		
							327.60	542.72	**177795.07**
	Total Construction Cost								**4570641.170**
9	**Cost towards Preparation of DPR LS**								**45707.00**
10	**Cost towards PMC / Third Party inspection LS**								**45707.00**
	Sub Total								**4662055.17**
11	**Miscellaneous and rounding off**								**337944.83**
	Total								**5000000.00**

Certificate.

1 The workspot was inspected and work is found to be necessary.
2 The area comes within the Bruhat Bangalore Mahanagara Palike limits.
3 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
4 The provisions made in the estimate are necessary and essential.

Assistant Engineer

Assistant Executive Engineer

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Executive Engineer

Executive Engineer
Project Division
Yelahanka Zone
Bangalore

20/4/17